REMARKS

Reconsideration of this application is requested.

This application is a division of pending U.S. Application Serial No. 09/616,843. Additional pending related applications are U.S. Application Serial Nos. 10/025,567; 10/038,260; and PCT Application No. US/01/49588.

Summary of the Invention

The invention is a method of substantially reducing or eliminating the incidence of illnesses in humans caused by the presence of targeted colony-forming illness-causing immunogens in meat by inhibiting the ability of the immunogens from adhering to the rumen or intestinal tracks of food animals. The targeted colony-forming illness-causing immunogens are from a class consisting of *E. coli*, *Listeria*, *Salmonella* and *Campylobacter*. These immunogens are common bacterial immunogens which cause food borne illness in humans and produce flu-like symptoms such as nausea, vomiting, diarrhea and fever, and in some cases kidney damage or death. *Page 2, lines 8-10.* The method is not a treatment for an illness in humans. The method is used to prevent illness in humans.

The principal object of the method is to substantially prevent the adherence of immunogens, such as *E. coli* O157:H7 from colonizing and growing in the rumen or intestinal tracts of food animals and substantially eliminate the immunogen from the feces of the animals. *Page 3, lines 1-5.* Foodstuffs contaminated with these bacteria have caused gastro-intestinal distress in hundreds of thousands of humans and the recall and destruction of millions of pounds of food. *Page 2, lines 10-17.*

The young chickens receive passive antibody protection through the store of antibodies placed in the eggs in which they develop from the embryonic stage. Chickens, in particular, have

the ability to "load up" their eggs as they are formed, with a very large supply of antibodies concentrated many fold over that which is present in the serum of the hen. In addition, chicken antibodies are much more stable and resistant to inactivation through digestion than mammalian antibodies, especially under adverse conditions. Once immunized the hen layers the unique IgY type immunoglobulins in the yolk while depositing the common chicken IgM and IgA immunoglobulins in the albumin. The albumin helps resistance to the whole egg preparations and helps protect the avian antibodies. Furthermore, the large quantities of antibodies which are placed in eggs are much more exclusively those specific for the antigens to which the mother has most recently been exposed to and challenged by. This all results in the eggs of chickens being a most ideal source for large quantities of economically produced, highly specific and stable antibodies.

The method for reducing or eliminating the incidence of illness in humans by inhibiting the ability of immunogens to adhere to the rumen or intestinal tracts of food animals thereby reducing the ability of the immunogens to multiply comprises first inoculating female chickens, in or about to reach their egg laying age, with the particular targeted immunogen from a class of immunogens consisting of *E. coli*, *Listeria*, *Salmonella* and *Campylobacter*. Then, after a period of time sufficient to permit the production in the bird of antibody to the targeted immunogen, the eggs laid by the birds are harvested. The entire antibody-containing contents, yolk and albumin, of the eggs are separated from the shells and dried to provide a dried antibody product. The dried separated egg antibody adherence inhibiting product may be stored or shipped for use when needed. The dried egg antibody product incorporating the antibody specific to the targeted immunogen is administered to the food animals by distributing the antibody material substantially uniformly throughout an animal feed or water and then supplying the resulting antibody-containing animal feed to the food animals. The antibody-containing animal feed is

supplied to food animals during the normal finishing schedule prior to slaughter. The IgY immunoglobulins bind to the targeted colony-forming illness-causing immunogen. The binding process is assisted by the IgY and IgA immunoglobulins by providing a longer sustaining effect of the antibody product. The IgM and IgA immunoglobulins have di-sulfide bonds that retain molecules together and provide larger antibody containing molecules. The larger antibody containing molecules are more effective in preventing adherence of the targeted immunogen in the digestive tract of the animal. Albumin is a protein that protects the activity of the IgY type immunoglobulin thereby increasing its active life in the intestinal tract. The result is that use of the antibody whole egg, yolk and albumin, mixed with animal feed or water substantially prevents adherence of the targeted immunogen in the intestinal tract of the animal thereby preventing multiplication and colonizing of the immunogen in the intestinal tract of the animal. Contamination of animal products and meat is eliminated due to the absence of the immunogen in the feed lot and its contents.

An alternate embodiment of the method includes the coating of carrier material with the combined egg yolk and albumin. The use of the carrier material helps distribute the entire contents of the eggs in a uniform method in the animal feed. The carrier material coated with the entire contents of the eggs makes it easier for mixing with standard animal feeds. *Example 21, pages 23 and 24.* The feed mixed with the carrier material coated with entire contents of the eggs is supplied to the animals. The yolk and albumin immunoglobulins bind the protein-wasting immunogens on the mucus tissue of the rumen and digestive tract of the animal thereby prevent adherence of the protein-wasting immunogen in the intestinal tract of the animal. The coated carrier material increases the duration of the effectiveness of the immunoglobulins.

A further alternate embodiment of the method includes the use of coating the mixed entire yolk and albumin on dry carrier material. A separate drying process is not used prior to

coating of the carrier material with the egg yolk and albumin. The elimination of a separate drying step increases the effectiveness of the immunoglobulins in inhibiting adherence immunogens in the intestinal tracts of animals.

Grouping of the Claims

The claims fall into three (3) groups. The separate groups of claims do not stand or fall together.

Group I comprises Claims 1, 2, 5, 8, 11 and 14. These claims define applicants' method for reducing or eliminating the incidence of illnesses in humans caused by colony-forming illness-causing immunogens in meat. The illness-causing immunogens are from the class consisting of *E. coli*, *Listeria*, *Salmonella* and *Campylobacter*. The method includes drying of the entire contents of eggs having yolks with IgY immunoglobulins and albumin with IgM and IgA immunoglobulins. The entire contents of the eggs having the IgY immunoglobulins and IgM and IgA immunoglobulins administered to the food animals inhibit multiplication and colonization of the illness-causing immunogens in the intestinal tracts of the animals. The IgY immunoglobulins bind to the colony-forming illness-causing immunogens which inhibit the ability of the colony-forming illness-causing immunogens to adhere to the intestinal tracts of the animals. The binding process is assisted and helped by the IgM and IgA immunoglobulins. In other words, the IgM and IgA immunoglobulins increase the binding of IgY immunoglobulins to the illness-causing immunogens. The result is the colony-forming illness-causing immunogens cannot multiply or colonize in the intestinal tract of the animal thereby reducing or eliminating the incidence of illness in humans caused by the illness-causing immunogens.

Group II comprises Claims 3, 4, 6, 7, 9, 10, 12, 13, 15 and 16. These claims include the subject matter of parent Claims 5, 8, 11 and 14 and the process of drying the entire contents of

the eggs having yolk IgY and albumin IgM and IgA immunoglobulins by coating dry feed carrier material with the entire contents of the eggs. The dry feed carrier material is from a group of materials including soybean hulls, rice hulls, corn, cottonseed hulls, distilled dried grains and beat pulp. The coated carrier material increases the duration of the effectiveness of the IgY immunoglobulins and facilitates mixing with standard animal feeds.

Group III comprises Claims 17, 18 and 19. These claims define a method for reducing or eliminating the incidence of illnesses in humans caused by colony-forming illness-causing immunogens in the rumen or intestinal tracts of food animals by inhibiting the ability of the immunogens to adhere to the rumen or intestinal tracts of animals and reduce the ability of the immunogen to multiply. The immunogens include *E. coli*, *Listeria*, *Salmonella* and *Campylobacter*. The method includes providing a feed carrier material, coating the feed carrier material with the antibody yolk and albumin of the harvested eggs. The carrier material coated with the antibody yolk and albumin is distributed substantially uniform in animal feed. The entire contents of the eggs having the IgY immunoglobulins and IgM and IgA immunoglobulins administered to the food animals reduce or eliminate the incidence of illnesses in humans caused by the presence of colony-forming illness-causing immunogens in the intestinal tracts of the animals. The IgY immunoglobulins bind to the colony-forming illness-causing immunogens which inhibits the ability of the colony-forming illness-causing immunogens to adhere to the intestinal tracts of the animals. The binding process is assisted and helped by the IgM and IgA immunoglobulins. In other words, the IgM and IgA immunoglobulins increase the binding of IgY immunoglobulins to the protein-wasting immunogens. The method does not include a separate step of drying the antibody yolk and albumin as required by the method of Claims 3, 4, 6, 7, 9, 10, 12, 13, 15 and 16.

35 U.S.C. 112 Rejection

Reconsideration of the rejection of the claims under 35 USC 112 is requested. The specification of the application complies with the requirements of 35 USC 112.

Under 35 USC 112 ¶ 1 "[t]he specification shall contain a written description of the invention and the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor to carry out his invention."

The specification clearly discloses applicants' method for reducing the incidence of food borne illnesses caused by the presence of colony-forming illness-causing immunogens in the rumen or intestinal tracts of food animals. The examiner on page 2, lines 1-5 has acknowledged that the specification discloses applicants' method reducing the incidence of food borne illnesses in humans.

The examiner has erroneously construed the requirements of 35 USC 112 to include any person skilled in the art to make and use the invention commensurate in scope with the claims. This is not the requirement of 35 USC 112 ¶ 1. To the contrary, it is the specification, according to 35 USC 112 ¶ 1, that contains the written description to enable a person skilled in the art to make and use the same.

The specification describes the methods of Selection of Egg laying avian hens, *pages 12-13*; Preparation of Stock Culture, *page 13*; Preparation of A antigens for Immunogens, *pages 15-16*; Preparation of O antigens for immunogens, *pages 14-15*, Preparation of P antigen for immunogen, *pages 16-17*; Preparation of CA antigen for immunogen, *pages 17-18*; Immunization of chickens with immunogens, *pages 20-22*; and Feeding of Cattle, *pages 27-28*. The specification contains a detailed description and best mode of applicants' process of reducing

or eliminating the incidence of illnesses caused by the presence of illness-causing immunogens in the rumen or intestinal tracts of the animals be inhibiting the ability of the immunogens to adhere to the rumen or intestinal tracts of the animals to reduce the ability of the immunogens to multiply or colonize. This description enables a person skilled in the art to make and use the subject microbial adherence inhibitor.

The examiner erroneously contends that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. To the contrary, the specification states that the IgY immunoglobulins very tightly bind to, coat, cover and obliterate adherins which attached themselves to their hosts. *Page 12, lines 11-13.* The particular language is the "binding of IgY immunogens to protein-wasting immunogens is being increased by the IgM and IgA immunoglobulins." This function is supported by the disclosure that the hen layers the unique IgY type immunoglobulins in the yolk while depositing the chicken IgM and IgA immunoglobulins in the albumin. The albumin helps resistance to the whole egg preparations and helps protect the avian antibodies. *Page 10, lines 4-5.* The whole egg preparation includes the IgY immunoglobulins in the yolk and IgM and IgA immunoglobulins in the albumin. The term "helps" means aids, assists and encourages the protection of the avian antibodies. This language supports the increase in the binding of IgY immunogens to the illness-causing immunogens as more IgY immunogens are available to bind to the illness-causing immunogens. The albumin IgM and IgA immunoglobulins increase binding in the mucus tissue of the digestive tract of the antibody containing material thereby providing a longer sustaining effect of the antibody containing material. The result is the use of the antibody whole egg, yolk and albumin, mixed with animal feed or water substantially prevents adherence of the targeted immunogen in the digestive tracts of the animals.

Applicants have provided a representative number of species of colony-forming illness-causing immunogens to describe the genus identified by the terms target colony-forming illness-causing immunogens in meat. These immunogens are well known illness-causing immunogens. The species of immunogens are identified as from a class consisting of *E. coli*, *Listeria*, *Salmonella* and *Campylobacter*. This class is sufficient to identify the genus of like immunogens to a person skilled in the art. One skilled in the art would be aware of the bacterial antigens noted by *Stolle et al '018* in column 5, lines 5-35. Claims 2, 4-16 and 18 particularly point out and distinctly claim the subject matter of applicants' method of reducing or eliminating the incidence of illnesses in humans as described in the specification with respect to *E. coli*, *Listeria*, *Salmonella* and *Campylobacter*.

35 U.S.C. 102(b) Rejection

Claims 1, 2 and 5 have been rejected under 35 USC 102(b) as anticipated by *Tokoro '895*.

Claims 1, 2 and 5 define a method for reducing or eliminating the incidence of illnesses in humans caused by colony-forming illness-causing immunogens by inhibiting the adherence of targeted colony-forming illness-causing immunogens in the intestinal tracts of live animals. This is accomplished by using the entire contents of eggs having the IgY immunoglobulins and IgM and IgA immunoglobulins. The IgY immunoglobulins bind to the colony-forming illness-causing immunogens which inhibits the ability of the colony-forming illness-causing immunogens to adhere to the intestinal tracts of the animals. The binding process of the IgY immunoglobulins is assisted and helped by the IgM and IgA immunoglobulins. This prevents growth and colonization of the immunogens in the intestinal tracts of the animals. The result is absence of the illness-causing immunogens in the feed lot and its contents and animal which can contaminate its meat.

Tokoro '895 discloses a method of inhibiting diarrhea in animals with bird antibody IgY using the yolks, albumin and the yolks of eggs. This method is related to the use of raw eggs by cattle herdspersons to treat scours (diarrhea in cattle caused by intestinal infection). *Tokoro '895* is directed to a specific antibody containing substance from eggs and method of production and use thereof for the prevention and treatment of colibacillosis and diarrhea in animals. There is no disclosure in *Tokoro '895* of an IgY immunoglobulin that binds to colony-forming illness-causing immunogens. The antibody containing substance also is used as a nutrition supplement, and as an additive to food animals. *Tokoro '895* does not provide a teaching of a method for reducing or eliminating the incidence of illnesses caused by colony-forming illness-causing immunogens by binding egg IgY immunoglobulins combined with IgM and IgA immunoglobulins to illness-causing immunogens, *E. coli*, *Listeria*, *Salmonella* and *Campylobacter*, to inhibit the ability of these immunogens to adhere to the rumen or intestinal tracts of food animals and to reduce the ability of the immunogens to multiply and colonize. It is submitted that *Tokoro '895* does not anticipate Claims 1, 2 and 5.

The object of the *Tokoro '895* disclosure is to administer to animals affected by an intestinal infection disease for therapeutic purposes. *Column 4, lines 1-4.* The *Tokoro '895* substance is also useful in the treatment of various infectious diseases, additives in food for livestock, cosmetics and medicines. *Column 4, lines 16-21.* Applicants' claimed method is not a treatment of a disease in animals. Applicants' method is the prevention of illnesses in humans by eliminating the illness-causing immunogens in animal meat. Applicants have discovered a new and useful method of preventing, as opposed to treating, illnesses in humans caused by colony-forming illness-causing immunogens. The examiner's statement that the *Tokoro '895* patent teaches a method of reducing the incidence of illnesses is not correct. The examiner also states that the dried egg antibody product of *Tokoro '895* functions "to prevent adherence of the

targeted immunogen in the intestinal tract of the animal." This function is not disclosed by *Tokoro '895*. Applicants request the allowance of Claims 1, 2 and 5.

35 U.S.C. 103 Rejection

Reconsideration of the following rejections of the claims as unpatentable under 35 USC 103 is requested.

1. Claims 1, 3-4, 5-7 and 17-18 are rejected under 35 USC 103(a) as being unpatentable over *Tokoro '895* in view of *Adalsteinsson et al, Pimentel* and *Betz et al.*

2. Claims 1, 2, 8 and 11 are rejected as being unpatentable over *Tokoro '895* in view of *Pell et al.*

3. Claims 3-4, 9-10, 12-13, 17 and 18 are rejected under 35 USC 103(a) as being unpatentable over *Tokoro '895* in view of *Pell et al* and further in view of *Adalsteinsson et al, Pimentel* and *Betz et al.*

4. Claims 1, 2 and 14 are rejected under 35 USC 103(a) as being unpatentable over *Tokoro '895* in view of *Adesiyun et al.*

5. Claims 3-4 and 15-18 are rejected under 35 USC 103(a) as being unpatentable over *Tokoro '895* in view of *Adesiyun et al* and further in view of *Adalsteinsson et al, Pimentel* and *Betz et al.*

There are insufficient teachings of the above combined references and no evidence of a motivating force which would impel one skilled in the art to make and use the claimed method of reducing or eliminating the incidence of illnesses in humans caused by colony-forming illness-causing immunogens in meat. The numerous rejections of the claims is evidence that one skilled in the art would not determine that it is obvious to use applicants' method of using IgY, IgM and IgA immunoglobulins in the entire contents of eggs to bind the IgY immunoglobulins to illness-

causing immunogens to inhibit the ability of the immunogens to adhere to the intestinal tracts of animals. The binding process of the IgY immunoglobulins is assisted and helped by the IgM and IgA immunoglobulins. The four rejections of Claim 1 on different combinations of art is evidence of non-obviousness of applicants' method in view of the prior art.

The test for determining obviousness of a claimed invention under 35 USC 103(a) is a four-part inquiry comprising (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art; and (4) commercial considerations when such evidence is present. *Graham v. John Deere Co.*, 383 US 1 (1966); *Simmons Fastener Corp. v. Illinois Tool Works*, 222 USPQ 744 (Fed. Cir. 1984).

Obviousness cannot be properly established by locating references which describe various aspects of a patent applicant's invention without also showing evidence of a motivating force which would impel one skilled in the art to do what the patent applicant has done. Simply because one can reconstruct an invention by combining isolated teachings of references is not a basis for an obviousness conclusion unless sufficient impetus can be shown which would have led one skilled in the art to combine the teachings to make the claimed invention. *Ex Parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. 1993).

It is well established that in deciding that a novel combination would have been obvious there must be supporting teaching in the prior art. *In re Newell*, 13 USPQ2d 1248 (Fed. Cir. 1989). The prior art must provide a suggestion to make the combination with structure shown and claimed. *CR Bard Inc. v. M3 Systems, Inc.*, 48 USPQ2d 1225 (Fed. Cir. 1998).

The examiner has the burden under Section 103 to establish a *prima facie* case of obviousness. He or she can satisfy this burden **only** by showing some objective teaching in the prior art to that knowledge generally available to one of ordinary skill in the art which would lead

that individual to combine the relevant teachings of the references. *In re Fine*, 5 USPQ2d 1956 (Fed. Cir. 1988).

Group I Claims

Group I comprises Claims 1, 2, 5, 8, 11 and 14. These claims define a method for preventing the incidence of illnesses in humans caused by the presence of colony-forming illness-causing immunogens in meat. The method is not a treatment or cure for an illness in humans or animals. The class of illness-causing immunogens consists of *E. coli*, *Listeria*, *Salmonella* and *Campylobacter*. Claims 5, 8, 11 and 14 specifically define the illness-causing immunogens as *E. coli* (Claim 5), *Listeria* (Claim 8), *Salmonella* (Claim 11) and *Campylobacter* (Claim 14). Chickens inoculated with the illness-causing immunogen develop IgY immunoglobulins in the egg yolk and IgM and IgA immunoglobulins in the albumin. The yolk and albumin are mixed and dried to provide a dried egg antibody product. This product is feed to animals with animal feed. The IgY immunoglobulins bind to the immunogens to prevent adherence of the immunogen in the intestinal tracts of the animals. This binding is assisted and increased by the presence of the IgM and IgA immunoglobulins. The result is that the immunogens do not colonize and multiply whereby the animals, feed lot and its contents are not contaminated with the illness-causing immunogens. The animal meat is also not contaminated with the illness-causing immunogen.

The teachings of *Tokoro '895* have been reviewed with respect to the 35 USC 102 rejections above.

The secondary references, *Pimentel, Pell et al* and *Adesiyun et al*, do not suggest applicants' method for prevent the incidence caused by the presence of colony-forming illness-causing immunogens.

Pimentel in patent '489 discloses a method for increasing feed conversion efficiency in mammals with a diet containing an antibody produced using the enzyme urease as the antigen. *Pimentel* states that chicken antibodies are generally known to protect the recipient against bacterial infections. *Pimentel* is limited to the use of an antibody against the enzyme urease to obtain increased feed utilization and body weight gain in animals. There is no teaching of a method for preventing the incidence of illnesses in humans by binding IgY immunoglobulins combined with IgM and IgA immunoglobulins to illness-causing immunogens to inhibit the ability of the immunogens to adhere to the rumen or intestinal tracts of food animals and to reduce the ability of the immunogens to multiply.

Pell et al discloses that pathogens, such as *E. coli* O157:H7, *Listeria*, monocytogenes and *Salmonella* are major problems in the swine and poultry industries. These pathogens also are a potential threat to human health. *Pell et al* does not suggest a solution to these problems. However, *Pell et al* does provide an estimated costs at close to 1 billion dollars per year related to *Salmonella* pathogen.

Adesiyun et al discloses that *Campylobacter* causes diarrhea in animals.

In view of the absence of a teaching in the prior art of applicants' claimed method for preventing the incidence of illness in humans it would not have been obvious to a person skilled in the art to make and use the method claimed in Claims 1, 2, 5, 8, 11 and 14.

Group II Claims

Claims 3, 4, 6, 7, 10, 12, 13, 15 and 16 further defined applicants' method of reducing or eliminating the incidence of illness in humans as including the process of coating dry feed carrier material with the dried egg antibody product. The dried entire contents of the harvested eggs is the dried egg antibody product. The coated feed carrier material increases the amount or length

of the intestinal tract subjected to the combined IgY, IgM and IgA immunoglobulins and the effectiveness of these immunoglobulins to inhibit adherence of the illness-causing immunogens to adhere to the intestinal tracts of animals.

The examiner has cited *Adalsteinsson et al*, the '878 patent, and *Betz et al*, the '867 patent, in the rejection of Claims 1, 3, 4, 5-7, 17 and 18 that include a dry feed carrier having a coating of dried egg antibody product.

Adalsteinsson et al disclose a method of administering to animals an effective amount of a gastrointestinal neuro-modulator antibody to neutralize the neuro-modulator. The egg is dried into an egg powder. An example of drying is spray drying. The dried egg powder can be mixed with animal rations or sprayed directly onto food pellets preferably in oil. *Column 9, lines 31-39.* This is a mixing process wherein dry powder is mixed with animal rations which include food pellets. Applicants coat a carrier material with the entire contents of the harvested eggs or dried egg antibody product which inhibits adherence of a colony-forming illness-causing immunogen to the intestinal tracts of animals. This is not suggested by *Adalsteinsson et al.* The coated carrier material is distributed into the animal feed. The animal feed mixed with the coated carrier material is supplied to the animals. The carrier material is defined in Claims 7, 10, 13, 16 and 18 as a group of materials including soybean hulls, rice hulls, corn, cottonseed hulls, distilled dried grain and beet pulp.

Betz et al disclose a method of making horse feed by mixing farinaceous material, proteinaceous material with fibrous materials, adding moisture, drying the mixture, and coating the combination with vegetable oil to enhance palatability of horse feeds. The fibrous materials are selected from a group consisting of soy hulls, cottonseed hulls, and rice hulls. The fibrous materials provide structural strength to the feed pellets and effect stool normality. The fibrous materials are not coated with egg antibody. There is no suggestion in *Betz et al* of a coating of an

egg antibody product on animal feed carrier material.

Mixing dry egg powder to animal rations and coating a mixture of animal food with vegetable oil does not suggest to a person skilled in the art to coat a carrier material with IgY, IgM and IgA antibody as defined in Claims 3, 4, 6, 7, 10, 12, 13, 15 and 16. Allowance of these claims is requested.

Group III Claims

Claims 17, 18 and 19 defined applicants' method of reducing or eliminating the incidence of illness in humans caused by colony-forming illness-causing immunogens in meat for human consumption. These immunogens are a class of immunogens including *E. coli*, *Listeria*, *Salmonella* and *Camplylobacter* as defined in Claim 19. The result is achieved by inhibiting the ability of the immunogen to adhere to the intestinal tracts of animals thereby reducing the ability of the immunogen to multiply and colonize. The method includes providing a dry feed carrier material, coacting the dry feed carrier material with the yolk and albumin of the harvested eggs having IgY, IgM and IgA immunoglobulins, distributing the carrier material coated with the mixed yolk and albumin substantially uniformly in animal feed, and supplying the animal feed and carrier material coated with the mixed yolk and albumin to food animals to prevent adherence of the immunogens in the intestinal tracts of the animals. The entire yolk and albumin coats the dry feed carrier material which absorbs moisture from the yolk and albumin on the carrier material. The method does not include a separate step of drying the yolk and albumin as required in the method of Claims 3, 4, 6, 7, 10, 12, 13, 15 and 16. The mixed yolk and albumin is not subjected to heat and forces of a separate drying process. The effectiveness of the anti-adherence ability is enhanced.

Claims 17 and 18 are rejected under 35 USC 103(a) as being unpatentable over *Tokoro*

'895 in view of *Adalsteinsson et al, Pimentel* and *Betz et al.* Reconsideration of this rejection is requested.

Tokoro '895 does not coat a dry feed carrier with a mixed egg yolk and albumin product.

Pimentel discloses a method for increasing feed conversion efficiency in mammals with a diet containing an antibody produced using the enzyme urease as the antigen. *Pimentel* states that chicken antibodies are generally known to protect the recipient against bacterial infections. *Pimentel* is limited to the use of an antibody against the enzyme urease to obtain increased feed utilization and body weight gain in animals. There is no teaching of a method of preventing illness in humans by binding IgY immunoglobulins combined with IgM and IgA immunoglobulins to immunogens to inhibit the ability of the immunogens to adhere to the rumen or intestinal tracts of food animals and to reduce the ability of the immunogens to multiply. There is no disclosure in *Pimentel* of coating a dry feed carrier with a mixed egg yolk and albumin product.

The examiner has also cited *Adesiyun et al* with respect to Claims 17 and 18. *Adesiyun et al* disclose that *Campylobacter* bacteria causes diarrhea in animals. There is no disclosure of coating a dry feed carrier with a mixed egg yolk and albumin product in *Adesiyun et al.*

The references to *Adalsteinsson et al* and *Betz et al* are cited as teaching to coat any of the animal feed, such as soybean hulls, rice hulls, cottonseed hulls, corns and distilled dried grains. It is noted that these teachings do not utilize a dry feed carrier material to dry mixed egg yolk and albumin having yolk IgY immunoglobulins combined with albumin IgM and IgA immunoglobulins coated on the dry feed carrier. *Adalsteinsson et al*'s dried egg powder mixed with animal feed rations does not dry the egg powder. Also, spraying dried egg powder on food pellets in oil does not dry the egg powder.

Betz et al does not disclose drying of mixed yolk and albumin with soybean hulls, rice

hulls or cottonseed hulls. The *Betz et al* animal feed is a mixture of materials including three hulls coated with a vegetable oil. The hulls are not used to dry any feed materials.

In view of the absence of a teaching of the claimed drying of mixed yolk and albumin with a dry feed carrier material by *Betz et al* or *Adalsteinsson et al*, it would not have been obvious to a person skilled in the art to make and use the method defined in Claims 17-19. Claims 17-19 are allowable over the subject combination of prior art.

In view of the above remarks applicants request the allowance of Claims 1 to 19.

Respectfully submitted,

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